

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process to produce a formed zeolite for adsorption purposes with improved adsorption and desorption properties comprising the following steps
 - a) mixing of at least one faujasite zeolite powder, in particular a zeolite 13X powder or a zeolite LSX powder, with a clay type binder, an inorganic phosphorous salt, and water and, optionally, with an organic additive,
 - b) production of a formed zeolitic body out of the mixture of step a), and
 - c) drying and calcination of said zeolitic body produced in step b) to fix the binder and to get the active adsorption reagent.
2. (Original) The process of claim 1, comprising after step c) a step of ion exchange.
3. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein the amount of clay binder is between 5 and 30 weight percent based on ~~of the~~ formed zeolitic body ~~weight~~.
4. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein the amount of clay binder is between 5 and 20 weight percent of the formed zeolitic body ~~weight~~.
5. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein the zeolite powder is at least 70 % in its sodium form.
6. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein the zeolite powder is at least 90% in its sodium form.
7. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein the zeolite powder is at maximum 30 % in its potassium form.
8. (Currently Amended) The process of ~~anyone of the preceding claims~~ claim 1, wherein a pore forming agent is added to the zeolite and binder mixture, ~~in particular at the~~ pore forming agent selected from the group consisting of Rayon fibers, Nylon fibers, Sisal fibers, and flax, and as well as organic polymers, such as selected from the group consisting of starch, starch

derivatives, ligninsulfonates, polyacrylamides, polyacrylic acids, cellulose and cellulose derivatives.

9. (Currently Amended) The process of ~~anyone of the preceding claims~~claim 8, wherein the pore forming agent amounts to 2 to 15 weight percent ~~based on~~of the formed zeolitic body weight.

10. (Currently Amended) The process of ~~anyone of the preceding claims~~claim 1, wherein the inorganic phosphorous salt used in step a) is a ~~water soluble phosphorous salt, in particular a~~ phosphorous salt selected from the group consisting of tetrasodium diphosphate, tetrasodium polyphosphate, trisodium phosphate, disodium hydrogen phosphate, sodium dihydrogen phosphate, tripotassium phosphate, dipotassium hydrogen phosphate, and ~~potassium dihydrogen phosphate or a mixture of two or more of said phosphorous salts.~~

11. (Currently Amended) The process of ~~anyone of the preceding claims~~claim 1, wherein the amount of inorganic phosphorous salt is between 0.3 and 5.0 weight percent of the formed zeolitic body~~based on the formed body weight~~.

12. (Currently Amended) The process of ~~anyone of the preceding claims~~claim 1, wherein the amount of inorganic phosphorous salt is between 0.3 and 3.0 weight percent of the formed zeolitic body~~based on the formed body weight~~.

13. (Currently Amended) ~~An zeolitic adsorption compound reagent~~ obtainable according to the process of ~~anyone of the preceding claims~~claim 1.

14. (Currently Amended) A process to remove by adsorption one or more low molecular weight organic sulfur compounds from a gaseous or liquid stream, wherein the feed stream is passed through a bed of adsorption reagent produced by the method ~~formed zeolitic molecular sieve according to claim 13~~1.

15. (Original) The process of claim 14, wherein the organic sulfur compounds are one or more low molecular weight mercaptans or sulfides.

16. (Currently Amended) The process of claim 14 ~~or 15~~, wherein the process to remove by adsorption is carried out with an adsorption temperature is at most of 60°C or lower.

17. (Currently Amended) A desorption process for the desorption of organic sulfur compounds from ~~a formed faujasite zeolite, in particular formed zeolite 13X or formed zeolite~~

~~LSX, or a mixture of formed zeolite 13X and formed zeolite LSX~~ the adsorption reagent obtainable according to the process of claim 1, wherein the desorption is done by a heating using a heating profile allowing the organic sulfur compounds to reach their equilibrium adsorption capacity at each temperature.

18. (Currently Amended) A desorption process, ~~in particular according to claim 17, for the desorption of organic sulfur compounds from a~~ the adsorption reagent obtainable according to the process of claim 1 ~~formed faujasite zeolite, in particular formed zeolite 13X or formed zeolite LSX, or a mixture of formed zeolite 13X and formed zeolite LSX~~, wherein the desorption is done by fast heating to a basic temperature of at most 200°C, ~~preferably 100 to 150°C, in particular about 150°C~~, and then using a temperature halt at different temperature levels starting at the basic temperature.

19. (Currently Amended) A desorption process according to claim 18, wherein the halt time is at least 10 minutes at each temperature level.

20. (Currently Amended) A desorption process according to claim 18 ~~or 19~~, wherein the temperature levels are at least 5°C and at most 50°C apart from each other.

21. (Currently Amended) A desorption process, ~~in particular according to claim 17, of organic sulfur compounds from a formed faujasite zeolite, in particular a formed zeolite 13X or formed zeolite LSX, or a mixture of formed zeolite 13X and LSX~~, wherein the desorption is done by fast heating to a basic temperature of at most 200°C, ~~preferably 100 to 150°C, in particular about 150°C~~, and then heating using a temperature increase of less than 3°C per minute ~~small temperature increase rate at temperature levels above the basic temperature~~.

22. (Canceled)

23. (Currently Amended) The desorption process according to Claim 17 ~~of anyone of claims 17 to 22~~, wherein the heating profile has a maximum temperature of at most about 320°C ~~wherein the zeolite is a zeolite of claim 13~~.

24. (Currently Amended) The desorption process of anyone of claims according to claim 17 ~~to 23~~, wherein the maximum regeneration temperature is about 320°C.

25. (Currently Amended) The desorption process of anyone of claims according to claim 17 ~~to 24~~, wherein the adsorption reagent is regenerated to its active adsorption state using a

regeneration gas is a material selected from the group consisting of dry natural gas, methane, liquefied natural gas liquids, hydrogen, nitrogen or and hydrocarbons.

26. (New) The desorption process according to Claim 21, wherein the adsorption reagent is regenerated to its active adsorption state using a regeneration material selected from the group consisting of dry natural gas, methane, liquified natural gas, hydrogen, nitrogen, and hydrocarbons.
27. (New) The process of Claim 1 wherein the faujasite zeolite powder is selected from the group consisting of a zeolite 13X powder and a zeolite LSX powder.
28. (New) The process of Claim 1, wherein step a) includes the step of mixing an organic additive with the other materials mixed in setp a).
29. (New) The process of Claim 15, wherein the process to remove by adsorption is carried out with an adsorption temperature of 60°C or lower.
30. (New) A desorption process according to Claim 18 wherein the desorption is done by fast heating to a basic temperature in the range of about 100°C to 150°C.
31. (New) A desorption process according to Claim 18, wherein the desorption is done by fast heating to a basic temperature of about 150°C.
32. (New) A desorption process according to Claim 19, wherein the temperature levels are at least 5°C and at most 50°C apart from each other.
33. (New) A desorption process according to Claim 21, wherein the desorption is done by fast heating to a basic temperature in the range of about 100°C to 150°C.
34. (New) A desorption process according to Claim 21, wherein the desorption process is done by fast heating to a basic temperature of about 150°C.